## **REMARKS**

The statement in the outstanding Office Action that claims 1-11 and 13 are allowed is appreciated.

The outstanding includes a rejection of claim 12 under 35 U.S.C. §102(b) or under 35 U.S.C. §103(a) over U.S. Patent No. 3,615,024 (*Michaels*). Claim 12 is canceled by this amendment. As a result, this prior art-based rejection has been rendered moot, and withdrawal of this rejection is requested.

The Applicants reserve the right to pursue canceled claim 12 in a continuing patent application.

The outstanding Office Action includes a rejection of claims 14-16 under 35 U.S.C. §103(a) over U.S. Patent No. 4,650,329 (*Barrett et al.*) and the disclosure on page 8 of the above-identified patent application. This rejection is traversed.

Claim 14 is directed at a method for measuring a diffusion rate of a first analyte into a first polymer. The method comprises positioning a test sample of the first polymer within a test sample region of an optical waveguide interferometer, positioning a reference sample of the first polymer within a reference sample region of the optical waveguide interferometer, passing a first beam of light through the test sample region to produce a sensing beam of light exiting the optical waveguide interferometer while simultaneously passing a second beam of light through the reference sample region to produce a reference beam of light exiting the optical waveguide interferometer, optically combining a first propagating light speed of the sensing beam of light with a second propagating light speed of the reference beam of light to create an interference pattern of alternating dark and light fringes, imaging the interference pattern through a two-dimensional array detector to produce a signal output, converting the signal output to a phase change output using a Fourier transform program, and determining the diffusion rate of the first analyte into the first polymer from the phase change.

As recognized in the outstanding Office Action, *Barrett et al.* "is silent as to determining the diffusion rate of the first analyte into the first polymer from the phase change." It is submitted that *Barrett et al.* are simply not concerned with determining diffusion rate of a first

analyte into a first polymer. Barrett et al. disclose an optical detection device for chemical agents. See Barrett et al. at column 1, lines 6-10. The "objects of the invention" described by Barrett et al. include discriminating between chemical agents, increasing the sensitivity of optical agent detection devices, discriminating between chemical agents by means of two-dimensional and three-dimensional signatures of those chemical agents, discriminating between chemical agents by means of a two-photon coherent state correlation function having very high signal-to-noise ratio with squeeze states, and eliminating electronic interference problems in the discrimination between chemical agents. See Barrett et al. at column 1, lines 20-43.

In addition to failing to describe the determination of the diffusion rate of a first analyte into a first polymer from a phase change, *Barrett et al.* are simply not interested in determining diffusion rate of a first analyte into a first polymer from the phase change. Furthermore, the outstanding Office Action fails to explain why one having ordinary skill in the art would modify the teachings of *Barrett et al.* to determine the diffusion rate of a first analyte into a first polymer from the phase change.

The outstanding Office Action points to the applicants' disclosure at page 8 for identifying an equation. Other than the existence of the equation on page 8 of the specification, the outstanding Office Action fails to sufficiently explain why one having ordinary skill in the art would have modified *Barrett et al.* to include a step of "determining the diffusion rate of the first analyte into the first polymer from the phase change" according to the present invention. This is a step that is not of interest to *Barrett et al.*, and is a step that deviates from the "objects of the invention" described by *Barrett et al.*.

In view of the above comments, one having ordinary skill in the art would not have received the suggestion to modify *Barrett et al.* to achieve the presently claimed invention. Accordingly, the claimed invention would not have been obvious from *Barrett et al.* and the equation on page 8 of the specification. Accordingly, withdrawal of the rejection is requested.

It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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Date: July <u>25</u>, 2005

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